REPORT RESUMES

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PROCEEDINGS OF NATIONAL SEMINAR ON PROGRAM PLANNING, BUDGETING AND EVALUATION, VOCATIONAL-TECHNICAL EDUCATION. FINAL REPORT.

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MARYLAND UNIV., COLLEGE PARK

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DESCRIPTORS- *SEMINARS, *PROGRAM PLANNING, *PROGRAM BUDGETING, PROGRAM DEVELOPMENT, PROGRAM EVALUATION, *VOCATIONAL EDUCATION, TECHNICAL EDUCATION, POVERTY PROGRAMS,

THIRTY-NINE FEDERAL AND STATE EDUCATORS FROM 33 STATES, 23 RESOURCE PERSONNEL, AND 15 STAFF AND CHAIRMEN PARTICIPATED IN A SEMINAR TO (1) DEVELOP INSIGHTS INTO THE PRINCIPLES AND PROCESS OF PROGRAM PLANNING, BUDGETING, AND EVALUATION, (2) INVOLVE STATE, REGIONAL, AND LOCAL STAFF MEMBERS, (3) DEVELOP A CADRE OF KNOWLEDGEABLE VOCATIONAL EDUCATORS, AND (4) DEVELOP GUIDES AND MODELS. PRESENTATIONS INCLUDED (1) "DEVELOPING POLICY AND PROCEDURES TO ACHIEVE GOALS AND OBJECTIVES" BY JOSEPH HALL, (2) "THE WAR ON POVERTY" BY HARRY HALLERY, (3) "FRAMEWORK FOR PROGRAM AND FINANCIAL PLANNING" BY GROVER DURNELL, (4) "RESOURCES FROM TITLE V FOR PLANNING AND DEVELOPING IN VOCATIONAL-TECHNICAL EDUCATION" BY HARRY PHILLIPS, (5) "RESOURCES FROM TITLE III FOR PLANNING AND DEVELOPING VOCATIONAL-TECHNICAL EDUCATION" BY LEE E. WICKLINE, AND (6) "WORK OF THE ADVISORY COUNCIL ON VOCATIONAL EDUCATION" BY MELVIN BARLOW. OTHER PRESENTATIONS ON SUCH SUBJECTS AS BUDGETS, EVALUATION, PROGRAM PLANNING, OBJECTIVES, POLICY AND PROCEDURES, AND SOURCES AND USE OF DATA ARE SUMMARIZED. AN EARLIER ADDRESS BY CARL D. PERKINS AND MATERIAL ON THE SEMINAR PLANNING UNITS ARE INCLUDED. DOCUMENTS REPORTING RELATED SEMINARS AND CONFERENCES ARE VT 002 137, VT 002 105, AND VT 004 630. (EM)

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PROCEEDINGS OF NATIONAL SEMINAR ON PROGRAM PLANNING, BUDGETING AND EVALUATION VOCATIONAL-TECHNICAL EDUCATION

~~June 1967~~

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

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FINAL REPORT

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PROCEEDINGS OF NATIONAL SEMINAR ON PROGRAM PLANNING, BUDGETING AND EVALUATION VOCATIONAL-TECHNICAL EDUCATION

Clodus R. Smith
John Connolly

University of Maryland

College Park, Maryland

December 15, 1967

The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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FOREWORD

The legislation embodied in the Vocational Act of 1963, in effect, initiated a revolution in vocational and technical education which has brought unfaced problems, different challenges, and new concerns. The need for more effective educational programs is becoming increasingly evident because it seems certain that a society which supports education as one of its tools of self-preservation and self-improvement will not long be patient with that sector which is no longer able to fulfill its role in society. It is clear that educators are faced with challenges which will not diminish and which cannot be ignored or taken lightly.

The increase in funds resulting from the passage of this recent legislation has focused national attention on the effectiveness and efficiency with which vocational and technical education programs are conducted. Never in the history of vocational-technical education have we faced such a multiplicity of problems and the need for immediate and long-range planning at the federal, state and local levels. The application of program planning principles, budgeting techniques, and methods of evaluation is a logical step in progression toward an appropriate balance between program effectiveness and efficiency.

The University of Maryland has responsibility for the pre-service and in-service development of vocational and technical educators within the state. Recognizing that attitudes, understandings and abilities cannot remain constant in this dynamic area of activity, the University has welcomed the opportunity to extend its activities to include the specialized training of vocational and technical educators employed by the Office of Education and by State Boards of Education throughout the nation. This National Seminar on Program Planning, Budgeting and Evaluation exemplifies the University's commitment to the development of professional personnel in vocational and technical education.

Planning and implementation of the seminar required considerable time and effort on the part of many people. To those consultants and Office of Education personnel who provided the expertise and assistance which enabled us to proceed with this important activity goes an expression of commendation and gratitude.

--Clodus R. Smith
June, 1967

PROGRAM OBJECTIVES

The Program Planning, Budgeting and Evaluation Seminar, held at the University of Maryland, was under contract with the U.S. Office of Education. The Seminar was designed to develop further the knowledge, understanding and skills in educational planning and evaluation of selected federal and state educators who have the responsibility for vocational-technical programs.

This seminar on program planning, budgeting, and evaluation was designed to focus on the immediate and long-range occupational needs of people, as related to their function in society and the Nation's labor force. Specifically, the objectives of the seminar were:

1. The development of insights into the principles and process of program planning, budgeting, and evaluation;
2. To stress the importance of systematic program planning and development to meet constantly changing requirements of vocational-technical education;
3. To involve State, Regional, and headquarters staff members in learning experiences necessary to design improved program plans for vocational education;
4. To develop a cadre of vocational educators knowledgeable in systematic program planning, budgeting, and evaluation;
5. To develop guides and models.

DIRECTORY OF RESOURCE PERSONNEL

Mel Barlow	Director, Advisory Council on Vocational Education and Professor of Industrial Education, U.C.L.A.
John Beaumont	Director, Vocational-Technical Education Illinois State Department of Education
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Russell Flanders	Acting Division Chief, Occupational Outlook Bureau of Labor Statistics, Department of Labor
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Harry Halley	Assistant for Research Plans, Programs and Evaluation, Office of Economic Opportunity
Everett Hilton	Assistant Superintendent for Vocational Education, Kentucky State Department of Education
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Sherrill McMillen	Director, Program Planning and Development Branch, Office of Education
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Harry Phillips	Director, Division State Agency Cooperative, Office of Education

Peter Pipe	of Pipe and Associates Los Altos, California
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Kenneth Scaggs	Staff Specialist, Occupational Education American Association of Junior Colleges
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Grant Venn	Associate Commissioner Office of Education
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Cecil Yarborough	Project Officer, Region IV - HEW

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Merle Strong	Director, Program Services Branch Office of Education

DIRECTORY OF PARTICIPANTS

State and Local

Arizona	**Eugene Dorr** **Assistant State Director of Vocational Education**
Arkansas	**Darrel Way** **Supervisor, Agricultural Education**
California	**Roland Boldt** **Department of Education**
Colorado	**James W. Wilson** **Assistant Executive Director** **State Board for Vocational Education**
Connecticut	**Frank Ferrucci** **Consultant, Program Planning**
Florida	**Leon Sims** **Division of Vocational, Technical and Adult Education**
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Illinois	**Alfred A. Redding** **Assistant Director** **Vocational Education and Rehabilitation**
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	Ray Pluemer **Supervisor of Trades and Industry**
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Missouri	Charles Henry Supervisor, Business & Office Education
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Pennsylvania	Morgan Lewis Research Assistant in Psychology
Rhode Island	Daniel Spaight State Supervisor of Business Education
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Utah	Harvey Hirschi Specialist, Occupational and Career Guidance
West Virginia	Arthur Maaynard Program Specialist
Wisconsin	Thomas Czerwinski Administrative Analyst
	John Plenke Program Administrator State Board of Vocational, Technical & Adult Ed.

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California	Howard Gundersen Acting Regional Director
Georgia	James Wykle Adult Vocational and Library Programs
Illinois	Loyal Miller Program Officer, MDTA
Massachusetts	Nicholas J. Hondrogen Acting Director Adult Vocational and Library Programs
New York	Grace Newell Regional Program Officer

PAPERS ON PRESENTATIONS

The Seminar was called to order June 19, 1967, at 9:00 a.m. by Dr. Clodus R. Smith, Director of the Summer School, Associate Professor of Agriculture and Extension Education, University of Maryland. Dr. Smith then introduced Dr. R. Lee Hornbake, Vice President for Academic Affairs, University of Maryland. Dr. Hornbake in his remarks alluded to the importance of the objectives of the seminar, the excellent caliber of the group of participants, and the interest and willingness of the University in being involved in such activity.

Keynote Address

Grant Venn
(not verbatim)

Dr. Venn set the tone of the conference with the keynote address. In the manner which is characteristic of his understanding of the problems in education, his philosophy that the individual's welfare must be society's concern and that education for work is a giant step toward enhancing that welfare, he charged the group with making the most of the ensuing days.

Some thought-provoking statements made by Dr. Venn are as follows (not accurate quotes): The concept of the role of vocational education is still not clear, nor is it understood by a great segment of the general public; there is much to do in this area. Much of it will involve planning that can be translated into production of the kinds of educational programs that society wants and understands.

Planning systems should always be the means to an end, never an end in themselves. The PPB & E system should provide a catalyst for judgment, not a lever which will dictate final decisions.

The word "graduation" has no place in a viable educational program. Education is never completed.

A school system has been lost to society through the demands for higher skills brought about by advancing technology. This refers to the informal, on-the-job training of a previous generation which provided opportunities for many to acquire job skills.

Occupational education is as much a fundamental necessity today as the three R's were in Jefferson's period. Occupational education must be an integral part of the whole educational system.

Program planning, to be of optimum value, must be based on the concept that there is a great variety of people with widely differing needs and that program planners who seek a panacea in one system will inevitably be frustrated in achieving their goals. If one could find a pat answer to educational questions or problems, it would be of little value because the questions and problems are constantly changing.

Dr. Venn suggested that program planning should be executed from a people-centered base line rather than a labor market-centered base line. A consideration for planners suggested by Dr. Venn is as follows: Is a program developed for meeting needs of people the same as, or similar to, that which would be developed for meeting labor market needs?

Dr. Venn delineated the following goals for education in general and vocational education in particular.

A. Long-range goals.

1. Each individual needs occupational training, consisting of saleable skills. He emphasized, however, that skill-training is not enough and that more attention must be given to employability skills. The reference here is to attitude, dependability, personality, etc.
2. Chances for re-learning and re-training must be available to all.
3. There must be an opportunity for upgrading. An example given here was the 40% dropout from colleges and universities. Much of this potential in human resources has been ignored.
4. Vocational education must do its part in meeting the manpower needs of the nation.
5. Vocational educators must develop flexibility to changes in the economies of various areas and be ready to change with the economy to meet the needs of society in these areas.

B. Intermediate goals.

1. Entry jobs for school leavers, whether they be graduates or dropouts who will not return to full-time schooling.
2. New relationships between vocational education and other institutions in society.
3. Expansion and redirection of programs such as special needs applications.
4. Better data collection and dissemination.

C. Immediate goals.

1. Occupational guidance for all youth at an earlier age.
2. Provide work experience for many more youth, resulting in employability skills and occupational information.
3. Reduce unemployment.
4. Provide for transition from school to work. In making the transition from school to work, it is highly desirable that the job which is furnished to the graduate or to the school leaver provide a further learning experience as well as work experience.
5. Be sensitive to the development of new occupational programs meeting the need as indicated.

In conclusion, Dr. Venn placed the emphasis on the development of human resources as being more important to the needs of society and the welfare of the nation than service to the occupations.

Summary of a Symposium

A Symposium consisting of the following members--Lawrence Gray, Everett Hilton, Kenneth Scaggs, James Sensenbaugh, and Cecil Yarborough--dealt with the problems encountered in coordinating educational program activities. These gentlemen represent a broad spectrum of responsibilities in education. They gave individual overviews of their areas of concern and it soon became evident that there are common problems and needs in each despite the varying objectives.

Among the commonalities set forth were such concerns as better communications, more effective articulation of special programs of various types into the total effort toward quality education for all people. The reality of the wide disparity between resources and needs was recognized by the symposium members and brought into focus the need for a medium by which resource allocation can be most accurately accomplished.

Goals and Objectives of the Seminar
(not verbatim)

Sherrill McMillen

Dr. McMillen posed the question at the outset of why the participants were in attendance at the seminar. From this thought-provoking springboard, he developed the thesis of the tremendous difference between current expenditures for vocational education and amounts spent only a few short years ago. The point of departure was established that planning and operation would need to improve to justify continuing the level of expenditures or to increase them. It was pointed out that systematic program planning, budgeting and evaluation in many departments of government was inaugurated several years ago at the request of the President. The results were good enough to warrant an attempt to apply these techniques to other departments whose activity and expenditures were of a magnitude and complexity which indicated a need for an up-to-date management system. The necessity to involve all personnel in an organization in the planning effort was stressed. If planning and decision-making are to be effective, they must be the product of a cooperative and coordinated effort by those who have a role in the organization and a stake in its future.

Dr. McMillen then reviewed the objectives of the seminar and referred to the flow chart on "Systematic Program Planning," which is included in this report. He also explained the procedure by which participants would have an opportunity to react to the speakers through small group interaction. In closing, reference was made to a budget which was submitted recently and which contained some new elements, such as health occupations programs and programs for the disadvantaged. It was stated that not too many years ago these programs were unheard of. This statement again reinforces the concepts described by Dr. Venn that planning should be done increasingly from a people-centered base line rather than an occupationally-centered base line.

Organization for Systematic Program Planning (not verbatim)

John Beaumont

Things are accomplished through an organization. The individual is important, surely, but the individual is, in our society, fundamentally a part of an organization. I believe in democracy and the democratic process, but there are times when the talking must give way to action in the planning process.

In Illinois, we have recently reorganized our administrative structure, a move which we believe will result in more effective program planning and implementation, budgeting and evaluation.

I have worked at one time or another in all of the states, and it is my opinion that the elements of educational problems are very similar throughout the country. Many feel that their problems are unique and that solutions which have worked in other states will not be successful in their states. These attitudes are often indicative of the desire to hold on to separate little kingdoms, such as agriculture, trades and industry, home economics, etc., and they prohibit development of an organization which can impact on or concentrate on the problems which must be solved. There is no way to apply the whole force to get the job done if each field operates in isolation from all of the others.

One of the principal weaknesses which is apparent nationally is the lack of a dialogue with the men who make the decisions about educational matters. These men are not interested in courses; they are interested in programs. Surely there is a dialogue about courses or elements of programs between specialists and lower echelon personnel, but this doesn't move the guy who makes the decisions. A state unit, staffed by persons who can engage in a dialogue with decision-makers, could be the answer to this gap in communication.

There are three thoughts I would leave with you which will be helpful in program planning and reorganization of staff structures:

1. Form follows function. Any system or organization which is expected to perform a function should be so constructed and geared up that it will be functional and meet expectations.

2. There is a need for courage--the courage to get started. A journey may be worthwhile even though the destination may not be clearly identified or visible at the outset.

3. When embarking on a reorganization, don't be hasty and think of throwing the crew overboard. It is important to keep the ship moving while reorganizing, planning, and changing the organizational structure.

The old systems of management in vocational education, in which the State Director has had all staff people reporting directly to him, tends to retard growth and progress. The plethora of new programs and responsibilities mandated by the new acts makes it necessary to organize in a new way. The chart which is being distributed shows the structure which we believe will be the answer for us in meeting these problems.

Reorganization of the Division of Vocational and Technical Education

John Beaumont

The reorganization of the Division of Vocational and Technical Education is intended to achieve the following objectives:

1. Provide an organizational structure to plan and develop a State-wide vocational and technical education program that will serve the manpower needs

of the State and the Nation, and will enable individuals at all levels of ability to become self-supporting.

2. Provide a staff to implement and supervise various occupational curricula.

3. Encourage and conduct research and development to achieve innovation through such subprocesses as problem identification, model design, experimentation, demonstration, evaluation, and diffusion.

4. Provide ancillary services which will improve the quality and the variety of programs offered.

5. Make available statistical and fiscal information for program development using the competencies of every staff member for this purpose.

The following statements briefly describe the functions of each major part of the organization:

Office of the Director

Administer the policies as established by the Board, coordinate the activities of the Division, represent the Division before the Legislature and Federal, State and local agencies, perform various personnel functions, be responsible for facilities, equipment and services, approve expenditure of funds and conduct a public information program.

Fiscal and Statistical Services

Account for all funds, prepare vouchers for all expenditures, prepare budget requests for State and Federal funds, prepare fiscal statements as required for State and Federal reports, collect statistical data, prepare statistical reports as requested by State and Federal agencies and for public information.

Program Planning and Evaluation Unit

Assume responsibility for program planning and promotion. Collect information that identifies occupational opportunities both present and future; relate this information to available occupational programs. Plan program development on area and Statewide basis with school administrators, community and State leaders, representatives of employment service and other local and State agencies.

Program Implementation and Supervision Unit

Assist representatives of educational institutions in the planning, development and implementation of occupational training programs. Conduct reviews and evaluation of on-going programs for the purpose of improving quality and service rendered to students. Organize and conduct in-service teacher education. Assist in curriculum development.

Program Services Unit

Provide ancillary services to support particularly the Program Implementation and Supervision Unit. These include services in such areas as guidance and counseling, work-study programs, cooperative education, persons with special needs, teacher education, curriculum development.

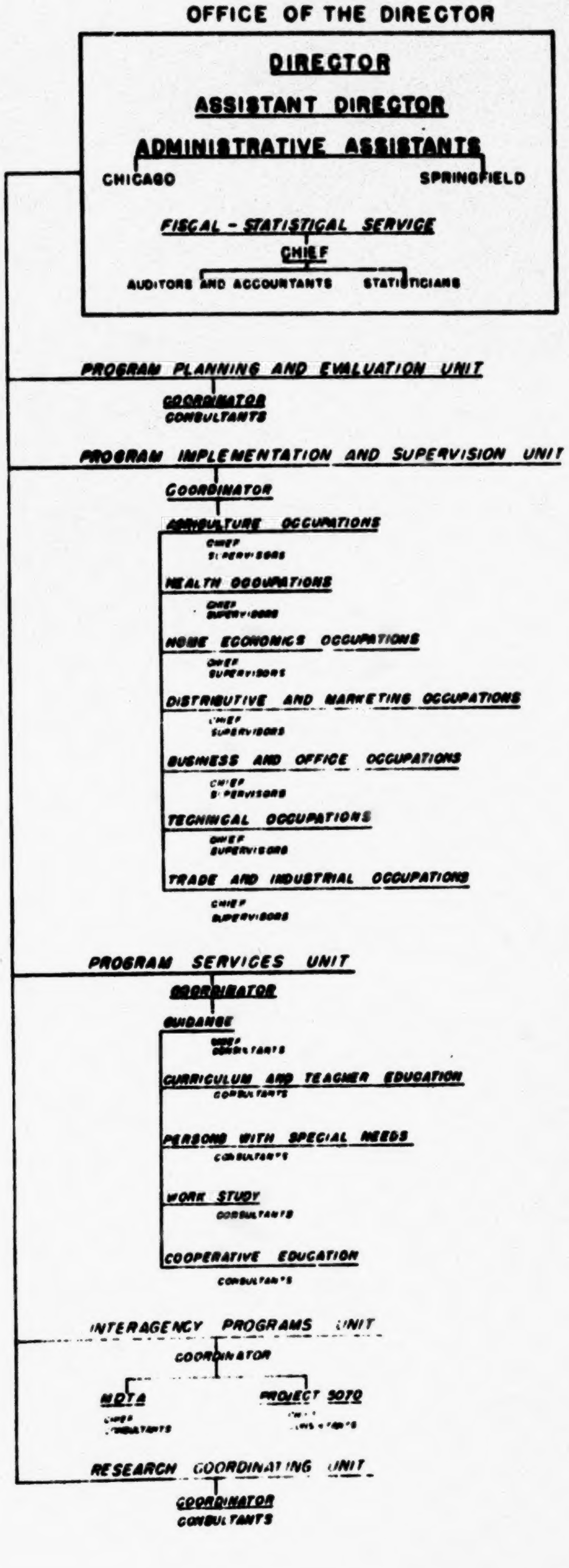
STATE OF ILLINOIS

BOARD OF VOCATIONAL EDUCATION AND REHABILITATION

RAY PAGE, EXECUTIVE OFFICER JOHN A BEAUMONT, DIRECTOR

DIVISION OF VOCATIONAL AND TECHNICAL EDUCATION

ORGANIZATIONAL CHART


OFFICE OF THE DIRECTOR
DIRECTOR
ASSISTANT DIRECTOR
ADMINISTRATIVE ASSISTANTS
CHICAGO
SPRINGFIELD
FISCAL - STATISTICAL SERVICE
CHIEF
AUDITORS AND ACCOUNTANTS
STATISTICIANS
PROGRAM PLANNING AND EVALUATION UNIT
COORDINATOR
CONSULTANTS
PROGRAM IMPLEMENTATION AND SUPERVISION UNIT
COORDINATOR
AGRICULTURE OCCUPATIONS
CHIEF
SUPERVISORS
HEALTH OCCUPATIONS
CHIEF
SUPERVISORS
HOME ECONOMICS OCCUPATIONS
CHIEF
SUPERVISORS
DISTRIBUTIVE AND MARKETING OCCUPATIONS
CHIEF
SUPERVISORS
BUSINESS AND OFFICE OCCUPATIONS
CHIEF
SUPERVISORS
TECHNICAL OCCUPATIONS
CHIEF
SUPERVISORS
TRADE AND INDUSTRIAL OCCUPATIONS
CHIEF
SUPERVISORS
PROGRAM SERVICES UNIT
COORDINATOR
GUIDANCE
CHIEF
CONSULTANTS
CURRICULUM AND TEACHER EDUCATION
CONSULTANTS
PERSONS WITH SPECIAL NEEDS
CONSULTANTS
WORK STUDY
CONSULTANTS
COOPERATIVE EDUCATION
CONSULTANTS
INTERAGENCY PROGRAMS UNIT
COORDINATOR
MDTA
CHIEF
CONSULTANTS
PROJECT 5070
CHIEF
CONSULTANTS
RESEARCH COORDINATING UNIT
COORDINATOR
CONSULTANTS

Procedures for Developing Objectives
(not verbatim)

Peter Pipe

Mr. Pipe impressed upon the group that a statement of objectives is critical in the planning process. If derived from narrow consideration of the goal and mission, it will rarely stand up to the test of being integrated into the system and will need to be revised again and again. It would be wise to begin by screening our objectives by looking at the problem from more than one point of view.

Mr. Pipe then gave the group a brief exercise in which he asked them to arrive at a decision as to three ways of knowing whether or not they had achieved their objective of integrating the idea of work into the value system of the student.

There was a considerable amount of difficulty encountered, by the group, in trying to develop three evaluative criteria because the objective as stated was not specific. Using this technique, Mr. Pipe developed the idea of the need for specificity, simplicity, and clarity in setting up a system.

Simple flow charts were developed and identified as cybernetic systems. Mr. Pipe used the simple example of the candy-making process, the objective being to make fudge. He pointed out that this system can be applied to the development of programmed instruction and, with additions and modifications, to overall educational planning, implementation and evaluation.

Mr. Pipe devoted a good deal of attention to the differences between process and product. It was evident from the interaction and discussions that followed in the groups that the differences are not easily identifiable in education. The ability to differentiate in these matters appears to be one of the skills which must be acquired by educational planners if planning is to be effective in producing the desired products.

In order to evaluate the results of the system, we must identify our objectives and quantify them in terms of volume and time. Quantification and time limitations allow us to set up checkpoints at which we will have measurable results or products. If we find that we have attained the desired results or products, we move out of the system. Finding that we have fallen short of our objectives, we loop back from the checkpoint to the station where the deficiency is evident and make changes. This process is repeated until satisfaction is achieved through gaining the objective.

TERMINOLOGY

MISSION: Imposed by legislation or other means. It describes the organization's reasons for existence, its general functions, and the limits of its jurisdiction.

GOALS: Established by the organization's leaders. They are the long-range accomplishments towards which programs are directed in fulfillment of the mission. They do not set time limits.

OBJECTIVES: Established by the organization's leaders. They describe the outcomes to be accomplished within specified time limits in fulfilling the mission and goals. They are measurable.

There is a progression from the broad terms of the Mission, through the more detailed description of intent contained in the Goals, to the specifics of what is to be accomplished and when it is to be accomplished described by the Objectives.

PROCEDURE FOR FORMULATING OBJECTIVES

1. Formulate a GOAL.	A Goal describes what is to be done. It ignores the question of how it will be done.
2. Identify the ULTIMATE PRODUCT.	This is the Objective, the outcome expected if the Goal is accomplished. It states what will exist and the time span, and thus is measurable.
3. Consider PROCESSes.	This is the means by which we close the gap between the Ultimate Product and what now exists. Not until this step do we consider how.
4. Identify INTERIM PRODUCTS.	These are sub-objectives, checkpoints. They are the outcome of each step in the selected process. They specify both Product and time and thus are measurable.

SPECIFYING OBJECTIVES AS MEASURABLE OUTCOMES

Why do we need measurable objectives?

1. So we can tell with precision when an objective is reached.

2. So we can identify areas of potential failure in time to make corrections.

3. So we can identify what is needed--the deficiency between products desired and products that already exist.

4. So we can accumulate data on what works or does not work and on how well it succeeds.

How will measurable objectives help you?

1. They give you the ability to evaluate on the basis of facts:

   (a) On-going evaluation, via the Interim Products, for early identification of potential weakness;

   (b) Final evaluation, based on the Ultimate Product, in which success is measured in terms that have been clear from the

beginning and which are not subject to the whims of interpretation.

2. They permit realistic identification of outcomes, thus providing:

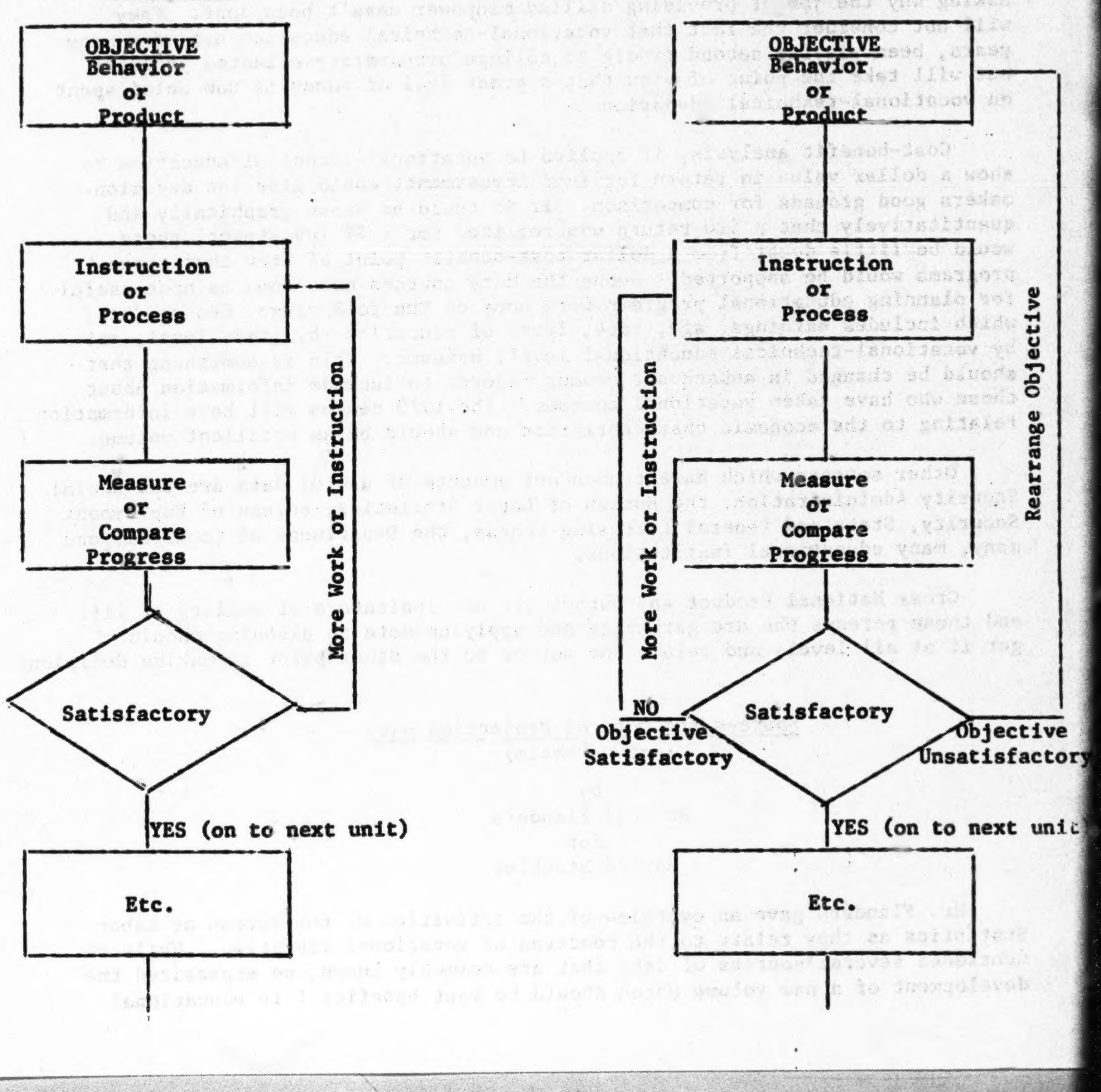
- **(a) An easier answer to the question, "What must we add to existing resources if we are to attain this objective?"**
- **(b) Realistic allocation of priorities and funds.**

What other benefits can be expected?

1. Facts, rather than opinions, for determining policy and setting future objectives--very important when one is innovating.

2. Channeling of effort and creativity into relevant activities.

CYBERNETIC SYSTEMS
Peter Pipe



1. Single Loop **2. Double Loop**

OBJECTIVE
Behavior or Product
Instruction or Process
Measure or Compare Progress
More Work or Instruction
Satisfactory
YES (on to next unit)
Etc.
OBJECTIVE
Behavior or Product
Instruction or Process
Measure or Compare Progress
More Work or Instruction
Rearrange Objective
NO
Objective Satisfactory
Satisfactory
Objective Unsatisfactory
YES (on to next unit)
Etc.

State and Local Projections
Data Sources
(not verbatim)

Lester Fishman

Vocational and technical education is coming into its own as a result of the demands for manpower in this period of prosperity.

PPBE was considered in terms of ideal conditions. The ideal will not be found usually due to the infinite variables which afflict planning and evaluation efforts. The ideal gives a good basis for discussion from which understanding of concepts may be gained. Once the concept and philosophy is understood, it is possible to construct a working system taking into consideration and allowing for the variables.

Industry and government will be looking to vocational education and asking why the job of providing skilled manpower hasn't been done. They will not consider the fact that vocational-technical education has, for many years, been playing second fiddle to college preparatory oriented programs but will take the point of view that a great deal of money is now being spent on vocational-technical education.

Cost-benefit analysis, if applied to vocational-technical education to show a dollar value in return for fund investment, would give the decision-makers good grounds for comparison. If it could be shown graphically and quantitatively that a $10 return was realized for a $1 investment, there would be little doubt from a dollar cost-benefit point of view that those programs would be supported. Among the data sources mentioned as most useful for planning educational programs were some of the following: Census data, which includes earnings, age, race, level of education--by grade level, not by vocational-technical educational level, however. This is something that should be changed in subsequent census reports to include information about those who have taken vocational courses. The 1970 census will have information relating to the economic characteristics and should be an excellent volume.

Other sources which have tremendous amounts of useful data are the Social Security Administration, the Bureau of Labor Statistics, Bureau of Employment Security, State and Federal Licensing Boards, the Department of Commerce, and many, many educational institutions.

Gross National Product and Output are not indicators of quality of life and those persons who are gathering and applying data to planning should get it at all levels and relate one source to the other prior to making decisions.

Sources and Uses of Projection Data
(not verbatim)

by
Russell Flanders
for
Howard Stambler

Mr. Flanders gave an overview of the activities of the Bureau of Labor Statistics as they relate to the concerns of vocational education. While he mentioned several sources of data that are commonly known, he emphasized the development of a new volume which should be most beneficial in educational planning. The volume, which is currently in draft form and being reviewed in ragional B.L.S. and B.E.S. offices, is entitled "Tomorrow's Manpower Needs." Present plans call for publishing this volume every two or three years, with necessary refinements and revisions.

A companion volume will be published by the Bureau of Employment Security and will be in greater detail. It is also in draft form at the present time. Mr. Flanders was of the opinion that, used jointly, these volumes will provide an excellent source of valuable data whereby the quality and accuracy of inputs in a planning system will be greatly enhanced.

When questioned about the individual who might be contacted for a copy of the volume when it is in print, he gave the name of Mr. Kuptyin of the Bureau of Employment Security.

Developing Policy & Procedures to Achieve Goals & Objectives

Joseph Hall

One thing we all know is that change will come whether we plan for it or not. But the piecemeal, haphazard changes of the past will no longer provide the kinds of solutions our schools need today. We can no longer move from one program to another in linear fashion, cutting an uncertain path as we go. We must have a clearer idea of the ultimate destination of all our programs in education, and we must map our itinerary with utmost care and precision.

Simply stated, this means that school leaders must give as much attention to the process by which changes are made as to the changes themselves. What we need is to bring more systems design to educational planning. This is nothing new, really. We already live in a century of systems: systems analysis, systems management, systems engineering. Systems-designed research and development is transforming the structure of American industry and technology. Systems strategy applied to education would help us look at our problems more comprehensively, to define our objectives more clearly, and to plan and evaluate our instructional programs much more efficiently than ever before.

I would like, therefore, to describe to you some of our thinking and current activities in the Dade County School System of South Florida, in applying a systems approach to program planning and program budgeting. Specifically, I hope to show these in terms of developing essential policy and procedures in the area of vocational-technical education.

First, we might categorize those areas where policy and procedures must be developed in a school system. Decision makers have responsibility to five component tasks:

One: Determining the goals of instruction--in this case within the sphere of vocational-technical education.

Two: Developing and implementing instructional programs most capable of producing optimum results.

Three: Maximizing instructional effectiveness through appropriate administrative direction, in-service training, technical assistance, and management support.

Four: Incorporating budgeting procedures most conducive to knowledgeable decisions on programming and financing.

Five: Providing ongoing evaluation of results on the basis of well-defined criteria to facilitate continuous modification and improvement of all parts of the system.

A systems approach to these responsibilities might look something like this:

RATIONALE	Determine your purposes for undertaking any program. Specifically, who will benefit? How will they benefit? And why is this worthwhile?
GOALS	State the objectives of the program in behavioral terms. What exactly do you expect the people involved in the program to be able to do at the end that they could not do when they started?
CRITERIA	On what basis will you judge the relative success or failure of the program?
PROGRAM PLANNING	Just how will you go about accomplishing your objectives? Where will you operate? On what timetable? With what methods, materials, personnel, facilities? What possible alternatives exist for achieving specific ends?
IMPLEMENTATION	How will you get your program into action? Where will the money come from? What training of personnel is involved? Do you need to build a model, conduct a pilot program, or consider selected demonstration centers first?
FEEDBACK	How quickly and how continuously can you gather data on the results of the program? What changes can you make in light of this ongoing evaluation? Should you re-examine your rationale? Restate certain objectives? Develop more realistic criteria? Modify the plans? Or seek new ways of implementation?

A systems approach provides a framework for defining, analyzing, and solving the complex problems of modern life for structuring the process of change in any field.

To capitalize upon what we believe is a constructive capacity for change in Dade County Schools and to give greater design to the process of that change, the Dade County Board of Public Instruction last year authorized the establishment of a new department in our school system: the Department of Instructional Research, Development, and Evaluation. Complementary to this instructional department is a research program for our support system through which we are currently seeking to develop a program budget and to increase the potential of automated data application.

How these two functions, instructional planning and support systems, will work hand-in-hand to design the process improving Dade County Schools might be illustrated to you by focusing on the area of concern today: vocational-technical education.

One of the fundamental projects which is already underway in our Department of Instructional Research, Development, and Evaluation is the Goals Project. This project is seeking to collect, define, organize, and code the goals of instruction in Dade County. We believe that these goals are best stated in behavioral terms for the student. In other words, what are the specific skills, processes, concepts, and attitudes which a student must acquire--as observable behaviors--through his education?

In terms of vocational-technical education, these goals are crucial; for they provide the foundation of present and projected instructional programs in the field. Goals in vocational-technical education must, of course, be compatible with the broad objectives of the total instructional program. As such, they must contribute to the development of a student capable of critical, creative, and ethical behavior in all he undertakes.

But vocational-technical education has its own particular role to play in the education of the young, and these goals must be defined on their own terms. Many of the specific vocational-technical goals can emerge from the rationale of employment-oriented skills and their value to the individual and to the community at large. Some of the goals will relate to the motivation which practical work skills lend to the more academic aspects of the school programs. Some of the goals will reflect the specific manpower needs of the community. Many goals will indicate the flexibility which must be afforded young people as they enter the job market; still other goals will meet the retraining needs of those whose skills are no longer sufficient in the changing work picture.

If instructional goals are written as student behaviors, it is much easier to see other aspects of the system as either instructional programs to achieve desired objectives or support programs to facilitate the projected instructional plans. But before either of these latter two functions can be considered, it is necessary to consider another crucial aspect of the systems approach. This is determining the critera of effectiveness. In other words, just how will you judge the effectiveness of your programs? What weight will you give to the various standards of measurement?

In establishing criteria will you, for example, judge your programs primarily on the basis of the number of students gainfully employed at the completion of instruction; or will you consider it more important to encourage many students to broaden or intensify their preparation? Will you lay great stress on programs which deter potential dropouts from leaving school? Will you be concerned to meet immediate manpower shortages in the area, whether or not these are compatible with the longer-range trends of industrial or business expansion? Will you seek programs that provide the most for the least amount of dollars? Or will you be influenced by opportunities for special financing or support? How much will you be limited by the factors of existing buildings, established facilities, present teacher resources? How will you be judged on pioneering programs that demand capital outlays for buildings or radical readjustments of instructional personnel?

By carefully specifying goals and measurement criteria, you can sharpen your understanding of the problems involved. Moreover, rather than predetermining solutions, you should be able to greatly expand in potential for imaginative solutions. The program planning stage of educational systems involves crucial decisions among possible choices. Some of these choices mean weighing the advantages of existing programs against possible innovations, of considering changes in minor parts, or the whole. Some decisions concern choices among activities and methodologies, of grouping practices, staffing procedures, materials and media, approaches to using facilities, and equipment to time and space factors. No aspect of the learning environment need be immune from scrutiny nor incapable of improvement.

In considering alternatives and arriving at decisions among projected plans, a program budget can provide invaluable assistance. The program budget displays educational costs in terms of the actual instructional programs being implemented or considered. Thus, it is possible to analyze and compare programs more realistically because the individual factors which determine their costs are clearly demonstrated. Through its multi-dimensional nature and precise breakdown of elements, the program budget enables comparison of cost factors to effectiveness factors in determining optimum programs.

The procedures for constructing and utilizing a program budget for vocational-technical education might follow a basic pattern applicable to any part of the school system.

It is first necessary to categorize vocational-technical education in some manner descriptive of the overall program. Programs might consist of subject groupings such as agriculture, distribution, health occupations, home economics, etc., shown on the upper part of a three-dimensional budget. Instructional activities within these categories could be broken down in as many formats as are useful to program and budget planners. Some of these sub-categories will be shown later.

A second general dimension of the budget would be the state account codes which divide costs according to well-known categories of salaries, capital outlay, equipment, supplies, etc. The line item costs of any program can be analyzed in these state account codes.

The third dimension categorizes the instructional support cost center responsibilities. Such factors as overall administrative and business management costs, research and development, in-service training, supervisory and guidance services, etc., represent instructional support costs which should be pro-rated among the specific programs.

This three-dimensional cost analysis and accounting framework provides a structure within which instructional programs can be planned, budgeted, accounted for, and evaluated. The grand total of all the programs included in the framework would constitute the vocational-technical budget for any operating period. Five-year forecasts, or more, of vocational-technical programs can be made in terms of the cost analysis provided. Advanced long-range planning becomes far more feasible towards accomplishing goals through systematic projection and development of programs.

A second advantage of the program budget is the standard cost schedules which can be provided. Cost trends are revealed by succeeding budgets and their direction can be quite accurately forecast for any particular year or period. Thus, many of the component costs for operating individual programs can be effectively standardized. Program planners can have these standard cost schedules available in considering the financial factors involved in undertaking new or revised programs. They are also useful in forecasting revenue requirements.

A third advantage of the program budget is that its format can be adaptable to any specific set of factors affecting decisions in program planning or financing.

One may demonstrate how program budgeting can provide comparison figures to judge the relative costs of individual programs in terms of their effectiveness ratios. With five columns representing various possible types of program organization to accomplish goals in a subject area, the second column might represent a traditional teacher-centered program using established equipment and facilities and basic textbook and supplies with some audio-visual materials. The fourth column, however, displays a budget for a highly innovative learning laboratory calling for the use of aides and technicians, but proportionately fewer hours of teacher time. Costs rise heavily in necessary capital expenditures for remodeling, in purchase of electronic equipment, plus self-instruction and A-V materials.

The total cost of each column is divided by total student hours to yield a cost per student hour. This total can be divided in turn by an effectiveness factor of perhaps the time rate for achieving objectives. If the learning laboratory produces results twice as fast as the standard teacher method, the effectiveness factor is two. The cost-effectiveness ratio dramatizes how choices among programs can be assisted not by their obvious dollar costs, but in terms of the instructional effectiveness of the dollars spent.

Another training center budget planning document displays the costs of an individual center's instructional program based on standard cost schedules. Such a budget might represent many compromises between what is desirable and what is financially feasible. In the early stages of program planning, priorities among desirable programs would need to be established. Cost-effectiveness ratios could be used in determining some priorities. In selecting final programs for the training center, planners would exercise judgment on a priority basis between the advantages of individual parts of a program and the realities of available revenue. Moreover, if additional revenue were to become available, additional programs or alternative forms of certain programs could be easily accommodated on a priority basis.

After the training center budgets are all planned, the next step is the preparation of a proposed vocational-technical budget for the whole system. This proposed budget can be organized by categories such as agriculture, distribution, health occupations, etc., according to the overall structure of the discipline. But more than that, each part could be divided into the individual subjects or studies which contribute to the student's training. A subject like home economics could be broken down into categories of foods and nutrition, clothing, home management, family living, institutional cookery, etc., according to the offerings available. Direct costs and indirect costs of each program are easily computed. Moreoever, the percentage of the total costs can be noted for each part of the budget. Such a budget can dramatically display the total picture of the vocational-technical program and the degree of emphasis given to each constituent part. Such a budget display could highlight imbalances in the program that might need to be rectified in revised training center budgets. Such budgets over succeeding years would indicate trends of the instructional program that might warrant special scrutiny. Certainly these figures would form one basis for evaluating whether the specified goals of vocational-technical education were being systematically pursued by actual instructional offerings in the school system.

I am sure that just these few representative program budgets have suggested to you additional variations or applications suitable to your own school situations. But in pursuing my theme, I want to recapitulate a bit of the systems approach which sets my overall pattern. As you recall, I mentioned some aspects of the rationale, the goals, the criteria, and the program planning stages of systems engineering which have implications to our topic of vocational-technical education. Now I would like to discuss with you some of the factors which need to be considered in the implementation stages of systems.

Most programs in our school systems are ongoing. As well-established institutions, our schools already have most of the human and technological resources ready to carry out the programs we propose. But what about those implementation factors which call for new procedures and practices? I would like to call your attention to a few that seem of particular relevancy here. The first factor is effective data flow and analysis. Modern management systems are crucially dependent upon sophisticated electronic processing of data, and in current terms we mean full and efficient exploitation of third generation computers. Thus, the application of modern technological approaches to education calls for systematic research into and development of efficient computer support of both the management and instructional data requirements.

Secondly, many new programs are possible only if personnel can be trained or retrained for their tasks. In-service training is nothing new to educational institutions. But as systems approaches bring instructional tasks and supportive management tasks more and more to critical interrelationship, the lines separating management skills, classroom skills, or administrative skills become less and less distinct. Job training in the field of education is being rapidly transformed. Instructional personnel--teachers, supervisors, administrators--must be acquainted with more and more of the technological and management factors of school operation, while support personnel must learn more and more about what happens in the classroom and how it happens in order that each group exercise its respective roles most effectively. Greatly expanded and radically restructured, in-service programs are a necessary implementation factor of effective systems development. They must be planned for, budgeted for, and carried out as simultaneous responsibilities of school change.

A final consideration in the area of implementation is the process by which new programs should be instituted. Schools can no longer catapult innovations into the classroom. We cannot afford the human cost or the dollar cost of such change. Just as reliable research design is crucial to program planning, model building and testing are critical requirements of systematic implementation. Our schools, therefore, need to take a greater responsibility for testing out new programs through pilot studies or demonstration centers before committing them to systemwide application. This is one way in which cost factors can be brought into line with educational objectives, but more than that; this is one way in which educational innovations can be tested out and evaluated before they are fully incorporated into the program. The vocational-technical departments of school systems are being constantly subjected to requests for new courses and new approaches in their programs. We should be pilot testing innovative ideas as continuous concurrent parts of our systems.

Finally, to be a complete system, every part of an efficient educational structure must provide ongoing feedback of data by which the system itself can be constantly modified and improved. The system design and provisions for data flow must expedite means of gathering, analyzing, and evaluating results at every stage of planning and implementation. Program budgets will provide cost criteria for evaluating programs. Goals and objectives will yield instructional criteria. In the field of vocational-technical education, as in every part of our school responsibilities, we must be committed to a policy of systematic positive change. Our task is to realize our potential for improvement through the procedures and processes most likely to achieve optimum results.

In summary, let us remember that progress in our schools is not attainable in neatly divisible parts. If the full potential of the behavioral sciences and the arts of instruction are to be realized in the classroom, they must be integrally supported by the best that modern technology, financing, and management can provide. As our schools work to improve these two functions systematically and simultaneously, we will achieve these worthy goals toward which we strive.

Basic Techniques of Program Planning

(not verbatim)

Robert T. Richards

I shall address myself to the problems and methods involved in the decision-making process concerning the allocation of scarce resources at the state-and-local levels of government.

A new term has arisen in the field of public finance which has aroused interest, confusion, and controversy--PPBS. In accordance with interest by state and local governments, our group at the George Washington University has been financed by The Ford Foundation for a two-year period to work with fifteen jurisdictions in developing PPB. These jurisdictions include five states, five counties, and five cities. They include as follows: in California--the state government, Los Angeles County and the City of San Diego; in Colorado--the City of Denver; in Connecticut--the City of New Haven; in Florida--Dade County; in Michigan--the state government, Wayne County, and Detroit; in New York--the state government and Nassau County; in Ohio--the City of Dayton; in Tennessee--Davidson County; in Vermont--the state government; and in Wisconsin--the state government.

If there is nothing radically new in the elements of PPBS, then one might rightfully ask why adopt the system? I believe there are three key words which justify the change in the decision-making process: integration systematic, and explicit. PPB is a system which integrates all the elements involved in the decision-making process, which eventually leads to the development of the budget.

A PPB system concerns itself with outputs--what is being accomplished--what is being purchased--as opposed to input considerations, such as the number of personnel, equipment, etc. This is not to say the inputs are not important, because they do determine the cost elements. However, PPB concentrates on the explicit objectives of government, such as the improvement of health, economic well-being, education, personal safety, environmental conditions, etc.

Given scarce resources and revenues, governments must decide what objectives, and to what extent, these objectives can be met. Thus, various programs are competing for these scarce resources and revenues. Vocational-technical education can achieve many objectives. The question to be answered is the extent to which resources and revenues should be used for such programs and in what manner.

The form of government is important because the manner of the implementation of the program is dependent upon this form.

The program analyses should be done within the department or agency involved with the program. Since any given program may be handled by several different agencies or departments, coordination between the different offices is of importance. The reason for developing the analyses at the departmental or agency level, is that the analysts should be in close contact with technically competent people in the field. A systems analyst may be very adept at developing an analysis, but may lack the technical knowledge necessary to evaluate different alternatives.

The basic requirements are the recognition on the part of the jurisdictions, and agencies within the jurisdictions, of what PPBS is and is not, and the personnel requirements.

PPB is a system designed to provide decision-makers with information necessary to making decisions among program alternatives. It is not a system which can be computerized and lead to automatic decisions. If anything, PPB may add to the problems of the decision-maker, if only because it is often more difficult to make a decision when given information on alternatives, than it is to make decisions without information.

The question of personnel requirements should also be recognized. While it is desirable to have systems analysts, economists, etc., on the staff, initially, much can be done without experts in quantitative analysis. While not objecting to the use of consultants for major program analyses, the development of a competent, internal, analytical staff cannot be overemphasized. This may be a gradual procedure, but it can be a vital development.

Crucial, also, to the success of a PPB system in State and Local governments is the availability of reliable data. Usually, we can make reasonably accurate estimates of costs, given the scopes of the various programs. However, two areas where data are woefully inadequate are in the measurement of needs, and the measurement of outputs, or success in achieving our goals. This is a problem at the Federal level as well as at the State and Local levels.

The War on Poverty

Presented by
Harry Halley
for
Robert Levine

Last summer the Office of Research, Plans, Programs and Evaluation of the Office of Economic Opportunity put together an anti-poverty plan and a four-year program based on that plan, for OEO and for the total War on Poverty of which OEO-funded programs are a part. OEO was probably the first civilian agency to do this. It was done hurriedly with the due date of Labor Day and with a planning staff that did not come on board until the first of July.

I want to share some experiences of this planning process. Although planning of this type was first done by the U.S. Government in 1961, in the Department of Defense, our problems as a civilian agency are quite different from those of Defense.

1. Welfare is easier to define than national security. That is, we know what we mean and can measure what we mean in terms of improvement of people as defined by income and other variables. Deterrence is much more difficult to measure.

2. We had a lot of data to begin with--more than defense. Good economic data have been gathered and tabulated in this country for 30 years or more, and for 20 years since the Employment Act of 1946 created the President's Council of Economic Advisers, the data have been quite good. Unfortunately, as most users will testify, these data are almost always out of phase with operational needs. There are problems such as the need for series on time and geographical bases different from the bases on which the data are gathered.

3. Unlike the Defense Department, we play a game against nature which makes our task considerably easier. We do not have to contend with a malevolent enemy.

These first three make our job easier than Defense; the next make it more difficult, however.

4. Unlike many of the Defense programs, our results are testable. They have not really been tested yet, although, when the 1965 Current Population Survey reported a drop of one million in the number of poor people from 1963 to 1964, a copy of the release was sent to OEO by a White House staffer who had written across it "nice going Sarge." Unfortunately, the change had taken place before OEO had really gotten into the business. In any case, the results of our activities are testable and are being tested and that means that our concepts will come into direct contact with what one of my colleagues calls the "real world out there." Thus far, deterrence theory has made no such contact.

5. Perhaps our greatest difficulty compared to the Department of Defense is that we started with no long history of accumulated systematic analysis in the field of poverty and social welfare. There had been, of course, much writing by economists and sociologists on related topics, but remarkably little of it systematically related costs and benefits of suggested policies or made systematic comparison of alternatives. The Department of Defense in 1961 had a huge backlog of accumulated analyses and policy recommendations from organizations like RAND, and much of what was done in 1961 and 1962 resulted directly from the intellectual investments started in 1951 and 1952.

I think we in OEO did a good quick planning job in this first year, but it was narrow and shallow because of the time constraints. It was narrow in that we did not consider as many alternatives as we should have; it was shallow because analysis did not go as deep as it should have. But, at least we know where the bodies are buried--we know what shortcuts we took and what simplifications we made.

What I would like to do today is to describe what we did and to draw some conclusions, but first, I want to expose a prejudice. We have done a set of system analyses of which we are pretty proud and I think that systems analysis properly done is bound to improve government planning and operations. Nonetheless, I am a bit skeptical of some of the uses made of systems analysis. For one thing the numbers used in systems analysis are always imperfect and to make decisions on the basis of small quantitative differences derived from very fuzzy inputs is wrong and is dangerous. If differences are small, then an entirely different basis for decision should be arrived at. Indeed, if quantitative results do not accord with one's intuiation, one had better check his numbers very carefully, because by and large intuition is the better guide.

A similar danger is that too much concentration on quantity, as is sometimes the case with systems analysis and systems analysts, can lead to asking the wrong questions. It is all too easy to substitute the concrete for the important, and it is frequently done. I know some pretty horrible examples of misuse of analysis.

An example of the dangers of systems analysis comes from some of our own work in the War on Poverty. Again it is a question of the use of cost-benefit analysis. It illustrates the possible use of quantity to narrow the focus down to the wrong questions. We, of course, avoided the error, but we could have made it.

In our OEO programs we do much training. For the evaluation of training programs, a frequently used method is that of matching the cost of the program against estimated increases in lifetime earnings derived from the training. If lifetime earnings, discounted properly, are greater than the cost then the training is justified. But for the purposes of War on Poverty training, in order to bring policy logic to this sort of computation, it must be assumed that if a training project is uneconomical--that is, if discounted earnings are less than cost--a preferable alternative would be to provide transfer payments for the less expensive direct support of those who would otherwise have been trained more expensively.

But our objective, as stated by our legislation, is not just removal of people from poverty by simple devices such as transfer payments. We operate under the Economic Opportunity Act and our primary mandate is to provide the opportunity for people to get themselves and their families out of poverty. In this case, therefore, the rationale of transfer payments as an equal-value alternative to training is incorrect. Even if discounted earnings were less than cost we might want to do the training anyhow because of the social value placed on ending poverty through personal opportunity.

To my mind the most important contribution of systems analysis is to demand a definition of objectives, and to make that definition operational. But that initial definition of objectives does not end our problems; it begins them.

How do we define the objectives of providing opportunity and reducing poverty? We decided that our major measure would be the number of people moved past a family-income benchmark we call the poverty line. To move people past an arbitrary line is not our objective but it is a measure which can be applied to our real objectives. It is a necessary compromise in the name of systematic decision making. So we try to move people by a line. What line? We decided to use an annual income measure.

Getting on with the job, the necessary step was to divide this defined poor population into subgroups. Here, one's first intuition about the groups to use is wrong. It's very tempting to use age groups--that is apparently the first impulse of anyone starting into the question. But age groups are not completely workable in terms of the above kinds of problems, and the kinds of programs with which we are trying to attack these problems. So we end up with a complex and overlapping set of categories--youth, aged, children, labor-force families, non-labor-force families. One really cannot divide the problems of poverty without looking at the programs designed to attack these problems, and we end up with a cross-classified matrix with objective groups on one axis and programs on the other.

To get a handle on programs then, we divided these programs into three functional groups according to the particular portion of the poverty problem that they were designed to attack. This division, a qualitative one, is the guts of our systems analysis. The three functional groups were jobs, social programs and transfer payment programs. These are three reinforcing categories--three legs of a stool--rather than being alternatives.

The importance of jobs is demonstrated definitionally. If opportunity is our primary objective then, in the American economy and American society as they exist, jobs are the name of the game. Opportunity means opportunity for self support which in turn means the opportunity to work in a useful and gainful job at non-poverty wages. If there are not enough jobs (and there were not at the time this analysis was made, last summer, although this has drastically changed since) we need programs to correct this deficiency. Job programs are important both because they provide immediate concrete and symbolic results from the War on Poverty, but they are also vital to the long-run effectiveness of our remedies.

Second in order, although not particularly second in importance, come social programs. The third leg is transfer payments--pure money payments for no services rendered.

This is the structure of our analytical system and note that I have described it without mentioning cost-effectiveness or cost-benefit once. Nonetheless it is systems analysis made systematic by organizing problems and programs into a structure where it becomes possible to examine alternatives and magnitudes in relationship to one another.

Let me conclude with two points. First, what I have been talking about is planning analysis and should be carefully distinguished from operations. For example, in talking about concentrated poverty, we defined this poverty to be that which existed in the lowest 25 percent of urban census tracts and the lowest 40 percent of rural counties. This was based on the greatest-need rationale described above, but what we were aiming at was a definition which would enable us statistically to measure the slums and rural depressed areas. For operational purposes, it is necessary to look directly for areas describable as slum or depressed areas, rather than arbitrarily decide on the particular tracts and counties we used for statistical purposes. Census tracts and counties are arbitrary definitions, and the only data currently available for these definitions are from the 1960 Census and are now six years old. The rationale of concentrated poverty by which we arrived at these definitions was not arbitrary, but it is the rationale rather than the superannuated statistics which must be used to apply programs to these areas. For statistical and budgeting purposes, the Law of Large Numbers implies that we are likely to be okay but the Law of Large Numbers cannot be applied to detailed local operations. More generally, planning does not control operations and one problem we have not yet solved is how to control operations to myet the plan.

Finally let me mention evaluation. The plan I have described is based on theory. For better or for worse, OEO very rapidly built up spending commitments for over one billion dollars which preceded the conclusion of the planning processes described. The planning, however, preceded the first results of the programs so that we planned and allocated on the basis of how these programs ought to have worked. This year it is different. We are beginning to get evaluative results on how our programs are working. What we can do now and are beginning to do is much closer to true cost-effectiveness analysis--matching actual effectiveness against actual costs. My skepticism about the over-use of such analysis still applies. Decisions should still be made only on the basis of big quantitative differences and the right questions should be asked whether or not the answer is quantifiable. Now, however, the quantities we are working with are real numbers and not hypotheses, which is a very substantial change. As I have said at the outset, our results are testable. They are being tested, and next year, I may speak with less confidence.

The Development of a Program Structure for Vocational and Technical Education

(not verbatim)

John Cotton

The basic objective of the development of a PPB system is to improve decision making in regard to resource allocation. In order to meet the requirements for improving decision making, one would expect the definition of a PPB system to vary substantially between levels of government and also possibly among different governments at a given level. This is to be expected; one should not view PPBS as a rigid system that should be transplanted in the same form everywhere.

The basic notion behind a program structure is that it should provide a useful and convenient framework within which to view government activities and programs. There are many ways to classify activities--perhaps the most obvious way is according to government organizational structure, e.g., into departments, agencies, bureaus, divisions, etc. Such a breakdown is useful for management and accountability purposes.

In PPBS we are talking of a kind of classification that we hope is suited to policy planning. We attempt to develop a program structure that facilitates the thinking through of society's and government's objectives and the means available for government to move toward the achievement of these objectives.

I would stress at this point the need for flexibility in the program structure. For purposes of normal operation of a PPB system, it will probably be necessary to settle on a single primary structure. In the real world, no single program structure is ideal and the final selection of categories will have to be a compromise that seems to best fit the needs of the particular organization involved.

However, there is no need to feel constrained by the primary program structure that has been selected by the particular organization. One can, as HEW has done, develop a multiple indexing system that through the use of modern information system technology can allow one to categorize programs in many different ways. For example, one could retain the capability of classifying programs according to occupational category as before or one could regroup the first level on a geographical basis, including for each county all of the Vocational Education activities under way there. There is almost no limit to the flexibility that can be built in this way. One can also include classifications too detailed for program summarization, but useful for analysis such as breakdowns of target groups by age, sex, race, aptitude, etc.

The basic notions behind the program structure in a PPB system are one, that the categorization should give a perspective useful for policy planning in meeting general objectives of society and government and two, that it should provide a framework that will be a useful starting point for the evaluation of different options available for moving toward the objectives that have been identified.

Framework for Program and Financial Planning

Grover Durnell

I. PROGRAM MISSION

A. Explanation:

The program mission is the reason for being, basis, ideology and rationale for the program. It is a careful and thoughtful statement treating such subjects as:

1. Public purpose and policy
2. Educational purpose and benefits
3. Social and economic purpose and benefits

It sets forth ultimate program expectations and ends--program aspirations, and fulfillment of the program ideal.

The program mission is derived from an analysis of

1. Governing statutes
2. Legislative intent
3. Administrative regulations, guidelines, policies

4. Concepts and expressions of the:

   (a) President
   (b) Secretary, Health, Education, and Welfare
   (c) Commissioner of Education
   (d) Associate Commissioner of Adult, Vocational and Library Programs,
       Deputy Associate Commissioner
   (e) Directors, BAVLP Divisions

The program mission serves as a base for:

1. Expression of program goals
2. Expression of program objectives

There cannot be a program goal not directly related to a program mission. There cannot be a program objective not directly related to a program goal.

B. Work Required:

Complete program mission statement for each program.

II. PROGRAM GOALS

A. Explanation:

Program goals are sub-elements of the program mission. They are specific areas of program effort and concern. A program goal answers "what is to be done." It precedes the "how it will be done." A program goal might include such expressions as:

1. "Elimination of adult basic educational deficiencies in those areas of greatest concentration of illiteracy, deprivation, and poverty."

2. "Vocational education opportunities for all persons in all communities."

3. "Adequate library facilities and services for all persons in all communities."

B. Work Required:

Develop complete list of program goals for each program.

III. PROGRAM OBJECTIVES AND PROGRAM OUTPUT

A. Explanation:

A program objective is the outcome of the development of program mission and program goals. A program objective expresses what will be accomplished. It is measurable insofar as possible within a specified time span. Program results and outputs are expressed in terms of program objectives. Some examples of program objectives/program outputs:

Program Objective	Time-span						
	FY 67	FY 68	FY 69	FY 70	FY 71	FY 72	FY 73
1. Number of students enrolled in vocational education, by type of program; by level--secondary, post-secondary, adult; special needs	XX	XX	XX	XX	XX	XX	XX
2. Number of participants completing adult basic education, by type and level of program of instruction	XX	XX	XX	XX	XX	XX	XX
3. Number of students aided under librarianship training program	XX	XX	XX	XX	XX	XX	XX

B. Work Required

Develop complete list of program objectives/output measures for each program.

C. Reference: HEW Guidance for Program and Financial Plan, pp. 115-117, 120, 121, 122, 123, 183.

IV. PROGRAM NEED

A. Explanation:

A statement of program need identifies and analyzes specific program target areas, and the dimensions of such target areas. Some examples of program need indicators:

Program Need Indicators	Time-span						
Public Libraries	FY 67	FY 68	FY 69	FY 70	FY 71	FY 72	FY 73
Total population	XX	XX	XX	XX	XX	XX	XX
Total served by libraries	XX	XX	XX	XX	XX	XX	XX
Adequate service	XX	XX	XX	XX	XX	XX	XX
Inadequate service	XX	XX	XX	XX	XX	XX	XX
Not served by libraries	XX	XX	XX	XX	XX	XX	XX
Vocational Education							
Total secondary enrollment	XX	XX	XX	XX	XX	XX	XX
Proportion (number of secondary enrollment to be provided with vocational education opportunities	XX	XX	XX	XX	XX	XX	XX
Number of adults in work force with less than high school education	XX	XX	XX	XX	XX	XX	XX

Number of adults in work force with less than high school education and without formal or informal occupational, vocational, job training	XX	XX	XX	XX	XX	XX	XX
Ratio of youth unemployment rate to general unemployment rate	XX	XX	XX	XX	XX	XX	XX
Units of construction (work stations, sq. ft.) needed to sustain projected enrollment	XX	XX	XX	XX	XX	XX	XX
Number of persons needed with Health Occupations training (nurses aides, licensed professional nurses, registered nurses, other) to meet estimated national manpower requirements	XX	XX	XX	XX	XX	XX	XX
Adult Basic Education							
Number of adults in population with less than sixth grade level of comprehension and understanding	XX	XX	XX	XX	XX	XX	XX
Number of adults in population with less than eighth grade level comprehension and understanding	XX	XX	XX	XX	XX	XX	XX

B. Work Required:

Develop complete list of program indicators for each program.

V. PROGRAM PRIORITIES

A. Explanation:

Program priorities are expressed in terms of target groups and program emphasis areas. Stated otherwise, where is the payoff of the program to come first. Often times, program priorities are expressed by a priority ranking of program goals. Some examples:

Adult Basic Education

Those adults with less than sixth grade level of comprehension with incomes of less than $3,000 per year.

Librarianship Training

Fellowships at the graduate level

in programs designed to produce additional faculty for schools of library and information sciences.

Vocational Education

Construction of vocational education school facilities.

Vocational education for persons with Special Needs.

B. Work Required:

Develop complete list of program priorities for each program.

VI. PROGRAM COSTING AND FUNDING

Financial planning becomes meaningful when one knows: (1) the dimensions of program need (see IV, above), (2) program objectives (see III, above), and (3) unit costs of program objectives/program outputs. A key and recurrent question is: What can be bought in terms of program objectives/program outputs with "X" dollars in comparison with "Y" dollars per years. This can be illustrated by the following:

Adult Basic Education	FY 67	FY 68	FY 69	FY 70	FY 71	FY 72	FY 73
Number of persons with less than sixth grade level comprehension and understanding	XX	XX	XX	XX	XX	XX	XX
Participant/training cost (per level of training	XX	XX	XX	XX	XX	XX	XX
A given level of planned training (number of participants completing training X participant training cost)	XX	XX	XX	XX	XX	XX	XX
Gap-Difference between a given level of planned training and program need	XX	XX	XX	XX	XX	XX	XX
Vocational Education							
Construction needed (work stations, sq. ft.) to sustain estimated enrollment	XX	XX	XX	XX	XX	XX	XX
A given level of planned construction (unit cost X amount of construction-work stations, sq. ft.)	XX	XX	XX	XX	XX	XX	XX
Gap-difference between a given level of planned construction and program need	XX	XX	XX	XX	XX	XX	XX

VII. PROGRAM ALTERNATIVES

Program alternatives are often expressed as choices or options in (1) methods of program operation and administration, (2) alternative funding levels with corresponding program objectives/program output. Some examples:

1. FY 1970 funding level for Librarianship Training is 5 million, what will be the program output in terms of students supported? Fiscal Year 1970 funding level for Librarianship Training is 12 million, what will be the program output in terms of students supported?

2. Adult basic education is a component of the "Adult Education Act of 1966" (Elementary and Secondary Education Amendments) and the Manpower Development and Training Act. Assessment of the strengths and limitations of these separately authorized and operated adult literacy training programs. Can such programs and activities aimed at the same target group be organized, operated, and administered in a more unified, effective manner?

VIII. PROGRAM REPORTING

Program reporting shows program accomplishment in terms of program output, in relation to the program plan. A program plan will estimate a level of program output such as individuals trained, 1969-1973. Program reporting will show actual accomplishment (individuals trained) for a given year within this time span. The unit of measurement (program output), individuals trained, serves as an example of a common element in program planning and program reporting. It is essential that the content of program reports include measures of program output that can serve as base-line data for long-term program planning purposes.

IX. PROGRAM ASSUMPTIONS

A. Explanation:

By nature, program planning requires explicit statement of assumptions about the future (5-year time span). The bases and specifics of estimates and projections must be stated. General guidelines conditioning the program plan should be noted. Illustrations of this are:

1. Youth unemployment rate in relation to general unemployment rate has been a persistent problem, and will likely remain a critical problem during the next ten years. (Vocational education and manpower development training programs should be oriented to respond effectively to this problem.)

2. The general educational level of the adult work force is, today, and will likely remain for the coming ten years, an obstacle to full employment, employment stability and advancement (Vocational Education, Manpower Development and Training, and Adult Basic Education programs should be oriented and funded to respond effectively to this problem).

B. **Work Required:**

Develop complete list of program assumptions for each program (1969-1973).

X. PROGRAM LEGISLATION

The responsiveness and utility of program enabling legislation needs to be under constant surveillance. Program planning necessitates systematic review of existing legislation in terms of long-term educational needs and demands. Specific legislative proposals should relate and follow from the development of 5-10 year program plans.

Resources From Title V For Planning and Developing in Vocational-Technical Education

Harry Phillips

In the Elementary and Secondary Education Act, Title V provides funds for strengthening State Departments of Education. One of the most interesting aspects of Title V is the planning possibilities which it offers.

Prior to the Elementary and Secondary Education Act, Congress took an overall look at the educational level across the United States. Weaknesses were found in the area of the disadvantaged child. Title I was then set up to correct these severe areas of deficiency. Title II was passed to relieve the shortage of library and related instructional teaching materials. Title III provided materials to locally organized agencies to undertake innovative and creative ideas and offer insight in promoting and upgrading education. Title IV set up twenty regional educational research laboratories in the United States.

Title V of the Elementary and Secondary Act of 1965 provides twenty-five million dollars the first year, and increases to fifty million dollars over a two-year period. These funds available to state educational organizations cut across a broad authority and are used to strengthen each state organization.

Title V services as amended provide for eighty-five percent of the funding for: (1) planning, (2) improvement of data, (3) research and development, (6) teacher preparation, (7) new programs of finance, (8) measurement in terms of testing, (9) staff development, (10) consulting services, (11) headstart and follow-up.

The functions of the state educational agency are: (1) general administration, (2) statistical and data processing, (3) developing the state and local educational agency competencies, (4) supporting local agencies in leadership and supervision, (5) developing evaluation of SEA programs, (6) offering leadership agencies for local structure improvement, (7) pupil personnel services, (8) school accreditation, (9) leadership to local agencies in improving American Education, (10) and other SEA programs and functions.

There is an additional funding of fifteen percent for interstate projects to develop leadership and establish educational services.

Title V is primarily a people-orientated type of broad interest program. Several states are banding together to study various problems and relate their implications to surrounding states. Some of the typical items being investigated are: the role and policy making activities of state boards of education; designing educational programs for the future; totally integrated educational information systems and facilitating desirable changes in educational programs.

The dimensions of educational planning involve systematic processes and include all educational levels. The comprehensive state-wide educational plan for all education levels will survey the present status, determine future needs, set priorities and develop planning strategy.

Some type of agency such as a "state-wide planning mechanism," will have to act as the cohesive agent so that these agencies may function together. This state-wide planning mechanism would develop the technical strategy for a state on a coordinated basis, achieving some of the action which has been difficult to achieve in the past. Such planning mechanisms are operating in Texas, Illinois and New York, while several other states and starting similar operations.

One of the problems of state-wide educational planning is that there has not been the right kind of comprehensiveness attached to it or the total kind of involvement that brings action from the plan.

Resources From Title III For Planning and Developing Vocational-Technical Education

Lee E. Wickline

Title III was designed to demonstrate new educational package solutions to problems through inquiry, invention, demonstration and adaptation. Title III is trying to bridge the gap through what we know, what we do, and then get the latest information into the schools.

Many projects are turned down because they offer more of the same ideas rather than something new in the form of solutions. The appropriations committee asked for two hundred forty million dollars for 1968 and will receive two hundred nine million dollars for expenditures for Title III.

Deadlines for submitting applications are July 1 for the second semester and January 1 for summer school or the first semester of the following school year.

Title III operation mechanism begins with the local educational agency submitting the project to the state agency where it is reviewed and submitted to an advisory committee for further study. Upon approval, funds are made available and the center or service becomes operative.

Projects are evaluated by the State Department of Education and the United States Office of Education. Impartial readers are selected, with proven competencies, who further screen proposals. One area program officer reviews the proposals and in some special types of plans, specialists may also be used to review the projects.

Each state receives an allotment of funds and local schools within the states must compete for Title III funds.

The National Advisory Committee is set up by legislation to establish guidelines and goals which are innovative and exemplary to the Title III program. High priority is given to human resource development and a somewhat lower priority to materials and facilities. Since Title III was developed about eighteen months ago, 5,000 proposals have been received with forty percent funded.

In the area of vocational-technical education, there have not been enough project applications received or funded. There is a need for new and additional proposals in the vocational-technical education field. It appears that there is a message in this for those who are interested in education in general and vocational education in particular.. There are funds available for worthwhile activities, which are not being utilized and this would be a good time for vocational educators to exercise leadership in getting a share of these funds for their programs.

Structuring State Program Objectives For Evaluation

(not verbatim)

Joseph Nerden

This topic tends to place itself in the procedures needed for evaluating the results of state planning objectives. Objectives tend to be general, and the planning that results in objectives tends to be extensive, time consuming and thought-provoking.

The question seems to be, how to structure for the evaluation of objectives? Perhaps the results of the planning should be evaluated. This is what the taxpayers and citizens will do. We must be concerned with the time, place, amount, and devices for measurement that the receivers of vocational services are concerned with. This could only mean that the state planning activities could best be measured for successes and limitations in terms of the locale, efforts, successes, and limitations. In other words what transpires in the local situation is a fair measure of the successes and limitations of programming at the state level.

I. The Philosophy in Evaluation of Vocational Education

Vocational education has been a matter of public concern for over sixty years, through its responsibility to the public and the dollars involved. Vocational educators must match this responsibility with fiscal efficiency and the requirement to obtain a dollar's worth of education for a dollar's worth of funding. Strengths as well as limitations should be reported professionally. The "special publics" served by vocational education, such as industry, technical, agriculture and distributive, are most concerned. Evaluation should suggest plans for maintenance and further improvement.

II. Concern for Evaluation is Being Evidenced

A concern for measurement of quality in vocational education is understandable and should involve answers to such questions as: Why do we evaluate? What do we evaluate? How do we evaluate? and Whom do we evaluate? Today, evaluation is often considered as a cost benefit type and defined in dollars and cents. Our concern for evaluation is much broader as viewed from the state programming level. Our objectives for youth hinge around the three phases which include: marketable manipulative skills and technical knowledge, preparation for active citizenship and the development of social competencies. The objectives for adults in the state programming activity are: emphasis on up-grading and up-dating, retraining for some and prevocational basic skills for others. As we plan and program there is a need to be concerned with the quality of instructional programs, including teaching methods and techniques; the facilities and equipment; and the personnel who conduct the education. But, our concerns are often hampered by our difficulty in communication. In state program planning the terms used in evaluation have a meaning quite different for each of the people involved. We talk together but we fail to communicate.

Our concerns for evaluation are being shared nationally as evidenced by Ralph Tyler's National Assessment of Education Project, Dr. Melvin Barlow's Committee in the U.S. Office of Education, the Dent Act National Committee and other special study groups across the nation.

III. What Do We Evaluate or What are the General Categories in Evaluating?

In general the state program can be evaluated by examined results achieved locally. The general categories developed for evaluation are: administration and supervision, programs of instruction, student personnel services and the plant and its maintenance.

IV. How Should Planning for Vocational Education Be Evaluated?

First, the objectives of the training should be determined through searching out, identifying and adopting criteria dealing with the prime targets. Next, inaugurate a program of self-evaluation dealing with the values inherent in being investigated. Local programs usually identify their own strengths, limitations, aspirations and need for supervision. This investigation could be followed by a committee visitation of experts drawn from skill areas of industry, business, education, management and labor. The committee would review all observations and findings, ask for suggestions for improvement and discuss with instructors or supervisors the commendations and limitations. Finally, on a cooperative basis, deficiencies would be removed, new techniques and materials acquired and reports of evaluation assembled and reviewed. Thus, evaluation results are most important in the area of improvement of the consumer. The fairest measure of objectives and their achievement are in the quantity and quality of vocational education received by the public.

Work of the Advisory Council on Vocational Education

Melvin Barlow

Historically, vocational education came into the news in 1914 when President Wilson appointed the commission on National Vocational Education.

The report of this commission eventually led to the passing of the Vocational Educational Act of 1917.

Forty-seven years later, in 1961, a similar report was equally important to President Kennedy and the noted Vocational Educational Act of 1963 evolved. There seemed to be further need for the study of vocational education; thus in 1966, the advisory council on vocational education was formed. The Vocational Educational Act requires an evaluation at intervals of no longer than each five years. This includes a review of the status of the administration of vocational education programs and the making of recommendations for the improvement of such administration with respect to the acts under which the federal funds were appropriated.

The report of the council will begin with a brief summary of the council and follow with the information reported. The probable major parts into which the report will be divided are:

1. A rationale for vocational education, dealing primarily with the philosophy and complexities of vocational education.
2. A synthesis of contemporary state and local development in vocational education.
3. The administration of vocational education at the federal level, the state level and the level of federal-state relationships.
4. A summary dealing with the growth and development of vocatonal education, focusing on the developments since 1960 with a special emphasis on the 1963 Act and the vocational-educational developments since this act.
5. The research in Vocational Education where 448 projects will be reported and a constructive look taken at the final recommendations made by the panel of consultants.
6. The present and projected needs of vocational education with an explanation of the different environments within which vocational education exists such as the social environment and the present and projected educational environment.
7. The financing of vocational education which will provide the background for the needed money for funding the vocational education program.
8. Major issues of vocational education will possibly be added as a special section.
9. Recommendations needed in vocational education for a more effective operation.
10. Recommendations needed in legislative change in vocational education.

A listening party of prominent vocational education leaders will help work up the considerations for this report. Two types of reports are to be made, one of a formal nature and the second of a more popular type, printed in quantities to furnish information to the public. The probable title will be something striking like "Vocational Education in a Dynamic Society."

Vocational Education must extend itself in scope, rising to pick up the more gifted and also lowering its dimensions to include the somewhat less capable students. We must remember that the vocational educational program is the only permanent program in education at the federal level. All others are temporary and are constantly being tested, evaluated and changed. Students cannot be separated on the basis of college bound or non-college bound. College is just a place where vocational preparation takes place. One of the goals of the panel is to provide that all children of all ages, of all communities, have the opportunity for vocational education. The council also realizes that this report may make an important impact on vocational education of the future.

Development of State Vocational-Technical Budgets

(not verbatim)

Richard Howes

Geographically, Connecticut is one of the more compact states, having approximately two and one-half million people. Connecticut is industrially orientated with over fifty percent of the gainfully employed people involved in some way with industry. This requires a large segment of skilled, semi-skilled and technical type people. Due to this facet, Connecticut has been forced to develop positive public support toward industrial education. Support such as this began in 1903 and superseded the Smith-Hughes Act by some fifteen years. The life blood of the state became the pool of skilled workers which must constantly be replenished for a continued and changing labor market. The State of Connecticut comes as close as any other state to offering a complete educational program in the area of vocational education. Vocational Education is free of charge, paid for by the community in which the student lives. This type of education results in a great deal of state operation; thus, Connecticut unlike most other states, has in the state division of vocational education, two operating bureaus which run four technical institutes and fifteen vocational-technical schools. These schools operate from state appropriations. Connecticut, as a result of the 1963 Vocational Educational Act, has found a need for more emphasis in finance and in the ancillary services of teacher training, research and development, curriculum development, guidance and services in the special needs area.

A TYPICAL STATE EDUCATION UNIT BUDGET--
SOME STEPS IN PREPARATION, ADOPTION, AND IMPLEMENTATION

Steps in Preparation

1. Identification of educational needs and programs to be developed to meet these needs. New or expanded facilities and services.

2. Preparation of performance or service budget.

3. Review and possible modification of performance budget by State Board.

4. Preparation of correct expense budget.

   a. Collections of operating expenditures in past years
   b. Identification of significant increases in request
   c. Justification of significant increases

5. Preparation of capital projects budget
    a. Studies of need for facilities
    b. Prospective itemizing requirements and estimated costs

6. Review and possible changes recommended by State Board.

Steps in Adoption

1. Transmitted to state budget director or similar executive fiscal officer.
2. Announcement of Governor's budget recommendations.
3. Consideration by legislative committees.
4. Acquainting committee members with plans and requirements.
5. Presentation of information of public hearing schedule by committees.
6. Report of committee to General Assembly.
7. Passage of Appropriations Act by General Assembly.
8. Signing of Appropriation Act by Governor.

Steps in Implementation

1. Allotment of funds for purposes authorized.
2. Expenditure of funds in accordance with allotment program.
3. Accounting for expenditures to stay within allotments.
4. Auditing of funds.

An Approach to Evaluation

(not verbatim)

K.M. Eaddy

The purpose of our presentation is twofold. It begins with an overview of an approach to evaluation and concludes with a description of activities and concerns for evaluating the program of vocational-technical education in Florida.

Assumptions basic to our statements should be explicitly identified. The first has to do with evaluative purposes. Vocational-technical education leadership must accept responsibility for evaluating the effectiveness of their policies, procedures, and programs to establish a logical basis for continuing or amending present activities.

Without effective evaluation there is no alternative but to rely on authority of tradition, intuitive judgment, and legislative mandate to provide direction for vocational-technical education endeavors. So, the first assumption is that we must accept responsibility for program evaluation.

The second assumption is one of definition. If we are to think intelligently about evaluation it must be defined. Much misunderstanding results from a lack of effective communication when people assign varied individual meanings to terms usually considered to have a universally accepted common meaning. Certainly this is true in the case of "evaluation." Throughout this presentation, therefore, EVALUATION will be defined as a PROCESS consisting of:

1. Expression of scope and objectives of vocational-technical education with sufficient clarity and explicitness as to suggest operational evidence indicating achievement in particular areas.

2. Pertinent data which describes the current status of vocational-technical programs.

3. Analysis of data to determine, in terms of quality and quantity of service, the extent to which the program is meeting established objectives.

4. Modification of practices, procedures, and programs, where necessary, in light of evaluative results to achieve established objectives.

Evaluation is not data, but a process which provides data and other information from which inferences may be drawn and necessary changes planned.

In our state, as elsewhere, programs of vocational-technical education are developed and provided for citizens in an atmosphere of constant change. If people lived in a relatively static society, vocational education could be a routine process. But, because of dynamic circumstances, we must constantly evaluate our efforts and base changes upon the most current data available for the solution of vocational education instructional and administrative problems. Hence, the need and importance of precise, imaginative, and continuing program evaluation.

Analogies are often useful when cursory reviews of problems are being made. It may be valuable to liken vocational evaluation to the feedback systems within modern machines. Some machines--and some programs of vocational education in our state--operate without benefit of built-in feedback. Malfunctions develop, program objectives are not met, and often are not noted until the the system fails to function, or until the product of that system changes to the extent that it exceeds acceptable limits of tolerance and its value steadily recedes toward the vanishing point. When such malfunction finally is detected, adjustments are hastily made and, again, a quality item is produced. But, in the process, much valuable material is invariably wasted.

A caution should be introduced, however, for evaluation is not intended to tell us only how well we are functioning. The major purpose is to point out where improvements are needed and how such improvements may be introduced.

We believe two types of evaluative data are needed to effectively evaluate Florida programs. Essentially, these are quite similar. The first is quantitative data to indicate the extent to which vocational-technical education is provided, as the law requires, for persons of all ages in all communities of the state who need and can benefit from such education. Data is needed on a continuing basis on present and projected employment needs of industry. Enrollment by age, sex, year in school, and year in training is also needed. Occupations for which training is provided, numbers completing training, placement in occupations, types and sizes of schools and communities offering programs and the types of programs offered, plus the per pupil cost of training are other areas of concern in local and state programs of evaluation.

The second type is qualitative data. Of the two types this, of course, is the most difficult to gather. We need evidence of changes in student behavior, performance while in the program and, after completion of the program, adjustment on the job. Such qualitative evidence of performance--in sales it is known as market information--is vital in identifying program needs, strengths, and weaknesses.

In light of the vital role of evaluation in program improvement, plans have been developed in Florida to initiate evaluative activities and procedures which will measure state-wide program effectiveness.

The plans include:

1. Identification and assessment of current vocational evaluation procedures being used.

2. Identification and assessment of vocational evaluative efforts in the state.

3. Development of an approach to evaluation that will be:

   a. Consistent with program objectives.
   b. Comprehensive in scope.
   c. Productive of valid data.
   d. Supportive of logical judgment.
   e. Continuous and integrated with total programs of vocational-technical education.
   f. Varied in evaluative techniques employed.
   g. Useful in the interpretation of data.
   h. Basic to the translation of data into vocational program improvement and expansion.
   i. Integrated with other evaluative programs in the state and nation.

Some major areas, briefly listed to show significant items to be measured in determining program effectiveness include:

1. School Plant and equipment
2. Instructional Program: course offerings in relation to current and projected manpower needs (local, state, regional, and national) interests, and student ability; materials and supplies including curriculum guides, audio-visual aids, reference materials, and shop and laboratory supplies in relation to course objectives.
3. Services: counseling and guidance; placement and follow-up; research and experimentation.
4. Administrative and Supervisory Personnel
5. Public Information Program (local school, county school system, Division of Vocational Technical, and Adult Education, and State Department of Education.
6. Expenditures by level (federal-state-local) for established programs (includes youth organizations), new programs, program supportive and related activities.
7. Teacher education

The next step will be to develop an approach for collecting data (quantitative and qualitative), relative to each item identified, in keeping with accepted criteria developed for each major area. Plans at this point include activities designed to:

1. Determine sources of data already available: i.e., statistical and descriptive reports, County Program Planning Guides, Projected Program of the Florida State Board for Vocational Education by fiscal year, and special VTAD-5 project reports.

2. Identify additional data needed not already being collected.

3. Initiate necessary efforts to secure needed additional data.

4. Analyze data collected in relation to stated objectives and criteria.

The analysis should become the basis for:

1. **Program expansion, modification, and the establishment of new programs.**
2. **Research, experimentation, and program development activities.**
3. **Recommended legislative progra.**
4. **Policy review--administrative and supervisory.**
5. **Staff reorganization and expansion.**

Address

by

Representative Carl D. Perkins

Chairman

House Committee on Education and Labor

June 30, 1967

I am happy to greet you today as representatives of the men and women responsible for the great strides we have made in recent years in the field of vocational education.

You have translated into solid accomplishment the aim and purpose of the Vocational Education Act of 1963, the Manpower Development Training Act, and other legislation in this field. For this, you deserve the lasting gratitude of your countrymen.

Because you so thoroughly understand the problem, no one realizes more clearly than you that 1967 is no time to rest on the glories of past achievement. This is the time to get on with the job.

There are still many of our fellow citizens who must be brought into the mainstream of American economic life, and kept there. I happen to believe that vocational-technical education is one of the best vehicles for getting this job done.

Geographically, our target is in the ghettos of the great cities of the land, in the rural Spanish-American areas of the Southwest, the Indian reservations of the Great Plains, the old tenant-farmer fields of the Southeast, and the isolated mining camps and rural communities of my Appalachian homeland.

But this is not a geographic problem to be attacked with dams and dikes and irrigation systems. This is a social problem involving 32 million Americans who do not share the general affluence of history's most prosperous civilization.

I am talking about our fellow citizens to whom the great breakthrough in health and medicine means little or nothing. The knowledge explosion and the great improvements in education have scarcely touched them. The billions we have spent on supersonic jets, interstate highways and 150-mile-an-hour trains leave them unmoved--for they are immobile in an age in which we talk of traveling to the Moon by 1970. The development of modern time-saving devices means little to a man when time already hangs heavily on his hands.

Today we are engaged in a great Congressional debate, the outcome of which will determine the future of these millions of American citizens. This, to me, is astonishing--that there should be any argument at all over the most concerted effort in our history to lift poverty from the backs of men.

Down on Pennsylvania Avenue there is a building on whose facade is inscribed What is Past is Prologue. In light of our progressive history and our abiding concern for human beings, I am convinced that when the debate is resolved within a few weeks, we will have taken another historic step forward. Were it to be otherwise, we would have to revise that inscription to read The Future Contradicts the Past. I do not believe for one moment that the American nation will turn its back upon the progressive tradition of its yesterdays.

As a matter of history, we began the 20th century with the prospect that a wage earner could live productively and in old age retire to a life of poverty.

We set out to revise that unhappy cycle with the enactment of the Old Age Survivor's Insurance legislation in 1935--a direct attack on the poverty that weighed so heavily on our elder citizens. This was thought of as an anti-poverty program.

Today, the Social Security Retirement system is no longer a poverty program. It is a broad-based retirement insurance program serving virtually all segments of the population.

Other landmark national legislation has sought to provide individuals and families with protection against those calamities with which they cannot cope. Unemployment insurance, workmen's compensation, bank deposit insurance, Medicare--these are just a few instances of national concern.

The point is this: Whereas in the past the victims of mass unemployment, the victims of disability or sickness, and the elderly were often subject to poverty, these conditions are no longer permitted to imprison millions of Americans in a straight-jacket of want.

These great programs which guard the mass of our citizens from economic disaster are, however, predicated upon the initial participation of all beneficiaries in the mainstream of American economic life.

That is to say, the Social Security retiree must first have been a wage earner. To be covered by the minimum wage law, one must first have possessed an employable skill and a job. To be a beneficiary of most of the technological and vocational programs, one must first have had certain basic education skills such as reading, writing, arithmetic, and quite often a high school diploma.

But the man or woman we are trying to reach today, the hard core victim of poverty, quite likely has never been a consistent wage earner. He may never have completed grade school. And, unfortunately, he is quite likely to feel hostile to the established institutions that serve the mainstream.

So you see, in spite of all the broad-gauge programs we have devised to shield people from economic disaster, some 32 million Americans are still confined to conditions of poverty.

These are not people put in a temporary squeeze because of a downturn in the economy. They are not necessarily people felled by injury or disease.

Theirs is a self-perpetuating poverty, inherited from their parents and now being transmitted to their children. It is a poverty of hope and motivation, and it is a poverty of outlook. The road ahead for these people is

downhill. They are isolated from the national goals, the national thought, and the national activity.

The vibrant economy of which this nation is so justly proud simply operates at a level above their heads and beyond their reach.

These were the men and women the country and the Congress had in mind when we enacted the Economic Opportunity Act of 1964. From the vantage point of 30 years of experience in social legislation, we saw that the needs of several million American families simply were not being met through the normal and institutional means of providing educational opportunities, welfare, economic development--yes, even occupational training. Many, many millions benefitted. But 32 million had not.

Perhaps most tragic of all is the fact that the children of the poor were insultated from the benefits we intended because of the unreachability of their parents.

I am happy to say that the great debate about which I spoke a few minutes ago does not involve abandoning the effort to reach the poor. Rather, the argument is over the means of doing it.

The efforts we initiated in 1964 are concerned principally with education, occupational training, health services, legal assistance and community development.

The principal critics of the 1964 act simply contend that these programs should be splintered away from the Office of Economic Opportunity and lodged in the established agencies of government that have traditionally operated in these areas.

I reject that argument. Moreover, I shall fight to the last hearing, the last motion, and the last hour of debate and conference to preserve a centralized and coordinated assault on the root causes of poverty.

It would be the height of folly to divide our forces and dissipate our strength at this critical point in the effort. Strong, efficient, coordinated direction is now being given by Sargent Shriver through the Office of Economic Opportunity. That is where these programs belong, and that is where they must stay until their success is so firmly established that their day-to-day administration can be delegated to the old line agencies of government.

A splintering-off of the anti-poverty programs from the Office of Economic Opportunity at this point in time would produce this result:

The agency to which the new program is assigned would have to reorient its operation in terms of servicing the poor and thus diminish it major mission.

The alternative is that the primary objective of the particular anti-poverty program would be diminished by merging with the broad mission of the old-line agency to which it is assigned.

I want you to understand that I am a longtime champion of the Department of Health, Education and Welfare. It is ably administered and performs

tremendous service to the nation. But I do not feel it is prudent to require that the Department reorient its operation or its mission in order to concentrate on the peculiar needs of the poor.

Similarly, the Department of Housing and Urban Development, the Department of Agriculture and the Department of Labor have broad-based missions to serve the needs of the nation. The constituencies of all these agencies have strong representation in national organizations to promote the general interest of farmers, home builders, workers, unions, and others. But they have no representatives of that vast, unorganized, inarticulate constituency of the poor. This group, 32 million strong, would simply be lost in the shuffle if the programs O.E.O. now administers were redistributed.

If anti-poverty efforts are to be parceled out to established agencies and to appear merged as only small budgetary items surrounded by budgetary items for the major missions of the agency, we shall have lost a major and perhaps decisive thrust in the effort to eliminate poverty.

This effort requires many different approaches, many different tactics and programs.

I cannot help feeling that we are neglecting one of the best approaches by underfunding our vocational education mission. In fiscal 1967, Federal support for vocational education under the 1963 Act reached a ceiling of $224 million. To meet the fundamental needs of vocational education, the Federal Government should be spending in support of these programs $1 billion annually.

I am hopeful that this Congress will raise the authorizations contained in Section 2 of the Vocational Education Act from $225 million to $400 million effective for fiscal 1968 and to $1 billion thereafter.

At the same time, I feel that it is urgent that we increase authorizations for the Economic Opportunity programs in the Occupational Training areas, in the Neighborhood Youth Corps, Job Corps, and community action oriented occupational training. By keeping these activities centered in the Office of Economic Opportunity we will assure continued focus upon the specific needs of the people now trapped in poverty.

At the same time we must assure the continued participation of vocational educators in Economic Opportunity oriented programs of occupational training. These programs are successfully and effectively reaching the most needy groups.

We are making good progress on many fronts. Let us make sure that this progress continues by keeping the effort against poverty united and coordinated in the Office of Economic Opportunity. I certainly hope you can support us in that intent.

Today I urge keeping intact the authority of the O.E.O. to engage in a great variety of programs specifically directed to poverty and the poor, but I look forward to the day when O.E.O. will work itself out of a job.

That day will dawn when the 32 million American poor finally achieve full participation in the good life that we know this country can provide.

APPENDIX

SOME CONSIDERATIONS FOR SYSTEMATIC PROGRAM PLANNING

1. NEED (problems)
   Identify - Define - Specify:

   Survey & Analysis
   Population Trends
   Occupational Changes
   Technological Changes
   Societal Needs
   Characteristics, Population Served
   Employment Opportunities

2. GOALS & OBJECTIVES

   Broad & Specific
   Measurable
   Long & Short Range
   Projected
   Time - Complexity - Prediction
   Behavioral Change

3. DATA

   Source - Pertinent - Valid
   Factual - Assumptions
   Projections
   Quantitative & Qualitative
   Analysis & Interpretation
   Presentation

4. ALTERNATIVES

   Courses of Action
   Feasible
   Impact
   Weighted
   Costs: People, Material, Time
   Money
   Prediction

5. DECISION

   Rationale & Justification
   The Course of Action

6. PROGRAM
   What, Where, When, Who,
   Why, How:

   Plan, Responsibility, Flexibility
   People, Material, Time, Money

   Occupational Categories
   Educational Levels
   Geographical Locations
   Educational Subdivisions
   Ancillary Services
   Non-Educational Services

7. EVALUATION

   Concept- Process - Products
   Total Program: Courses, Teacher, Student
   Methodology, Facilities
   Analysis, Interpretation & Impact
   Quantitative & Qualitative Data
   Objectives Achieved
   Desired Change
   Required Change
   New Directions & Emphasis
   Continuous - Planned

Roles for Planning Units

All participants in the seminar were involved in program planning work assignments. Their roles in the planning units and the problems which were used were as follows:

	Group A	Group B
Role	Name	Name
State Director	Joseph Malinski	Johnny Browne
Planning Directors	Glen Strain	Frank Ferrucci
Budget Director	Edgar Hume	Thomas Czerwinski
Guidance Director	Charles Rogers	Harvey Hirschi
Research Director/ Occupational Analyst	Kenneth Wold	Robert Hatton
Instructional Levels Chief (Sec., Post Sec., Adult)	Loyal Miller	Luther Thompson
Special Needs	Grace Hewell	Howard Gundersen
Curriclum/Facilities	Michael Kozma	John Cummings
Teacher Education	James Wilson	Leon Sims
Distributive	Roland Boldt	James Wykle
Health Occupation	John Plenke	
Home Economics	Arthur Maynard	Robert Balthaser
Office Education	Charles Henry	Daniel Spaight
Technical Education	Nicholas Hondrogen	Warren Smeltzer
Trades & Industrial Education	Al Ringo	Harold Mailman
Agricultural Education	Darrell Way	Keith Lee

Statement of Planning Units' Work Assignment

Using the FY 1965 Statistical Tables and assuming they are the FY 1967 data, project a new program for FY 1968 with 15 percent more Federal money as a State allotment for FY 1968. The additional funds were appropriated with the understanding that priority be given to the problems which accompany this statement.

Each of the Planning Units will select 2 problems from each of the occupational areas for which they will plan programs. Each Planning Unit is responsible for establishing its own organization and working arrangements. Consultation should take place among the various members of the group, in their respective roles, using pertinent data and incorporating appropriate suggestions made by the several presenters. The "Outline of Planning Units Reports" is to be used in developing programs to meet selected problems.

Problems for Planning Units

OCCUPATIONAL:

Health Occupations

1. Increasing the number of Practical Nurses

2. Increasing the number of Associate Degree Nursing Programs

3. Expanding the staff for the administration of the health occupations training program

4. Developing a pre-employment program in the secondary school to train nursing assistants or patient care technicians.

Agriculture Occupations

1. To meet the needs of young farmers who have completed high school, taking secondary courses in agricilture, plan a short term supplementary program which will meet some of their needs.

2. To provide for young men who have never taken courses in agriculture, but who are farming or planning to go into agriculture work, implement a program of instruction to provide preparatory courses in area schools, and at the junior or community college level.

3. By using available data, show where providing for agricultural courses in urban schools will meet specific needs. Make an analysis of the data, and show future directions.

4. In the teacher training field, work out programs of both pre-service and in-service training which will prepare teachers to meet the changing requirements in agriculture.

Office Occupations

1. Plan a balanced State program for occupational training in office occupations. At the same time include ways to make the program acceptable

to the general school administrators.

2. Plan a teacher education program to provide well-trained occupational teachers to teach occupational skills.

3. Develop plans which illustrate the best approaches for planning and building a cooperative program in office occupational skills.

4. Plan ways in which realistic work experience can be simulated for a general program of office education.

Technical Education

1. Draw up a plan for recruitment and training of qualified teachers in the technical field.

2. Prepare a plan for inaugurating a pre-technical program in mathematics, science, and communication skills in the secondary schools which would prepare students to qualify for admittance to the technical schools. Graduates qualified for technical training usually enter schools of engineering and unqualified students apply for area technical schools.

3. Develop a plan to most effectively reach school administrators, (superintendents, commissioners of education, etc.) to create understanding of the costliness of a quality technical education program in terms of:

a. Facilities
b. Equipment
c. Other facilities (spell out)
d. Continuing cost escalation

4. Using a community college as a base, plan a balanced program to allocate technical courses and academic courses for transfer credit, to meet the needs of students who take the two-year academic and transfer to a four-year program in a college or university, and to meet the needs of students who take the two-year technical program.

Trades and Industry

1. Make a suitable plan for establishing a job placement service for each school which will include a follow-up check of students placed. Show how this could be used at any level, high school, post-high school, and adult.

2. To meet the needs of many high school youths who will choose a vocational program in the senior year, plan a program that offers a short, intensive, entry job type skill development curriculum which will prepare students for work upon graduation.

3. Make plans to promote and sponsor the VICA (Vocational-Industrial Clubs of America) and utilize its services.

4. Plan ways to develop standards both to maintain quality programs, and to keep up to date with emerging technolgoy.

Distributive Education and Marketing

1. Plan ways to shorten the lag between

    a. Determination of needs
    b. Establishing programs to meet these needs

2. Using methods for improving public relations show practical ways we can improve the public image of careers in

    a. Distribution
    b. Marketing

3. List ways of implementing the adult program through both

    a. Preparatory courses
    b. Supplementary courses

4. Plan programs in the area schools to provide for vocational education at all levels

    a. Secondary
    b. Post-Secondary
    c. Adult
    d. Special Needs

Home Economics for Gainful Employment

1. Identify occupational areas of home economics which should have training programs provided in post-secondary area schools and community colleges. Also, identify types and kinds of curriculums needed.

2. Show how data may be obtained (local or State) for finding the need for human service in occupations, including, but not limited to

    a. Child Day Care Centers
    b. Nursing Homes

3. Plan in-service home economics teacher training for a big city school system. Work out a program to provide curricula for working with people with special needs. (big city problems) Identify these needs and ways to adapt existing programs to meet them.

4. Make plans to initiate new programs in gainful employment occupations for home economics. Include ways to determine needs, facilities, curricula, etc., and how to implement a cooperative program.

COMMON: (To be worked on as feasible)

1. Guidance and counseling of adults

2. Special needs

3. Recruitment and training of teachers

4. Placement and follow-up of student

5. Relationships between Employment Security and Vocational Education